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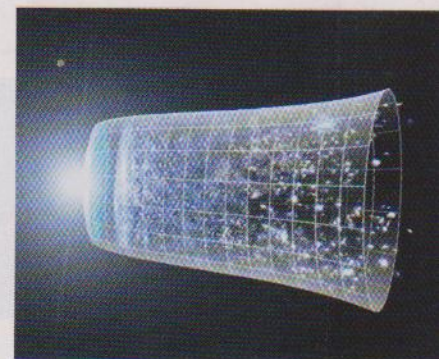
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Immuno-electron micrograph of a plastid-dividing ring (diameter ~500 nm), a structure required for chloroplast division, isolated from the unicellular alga *Cyanidioschyzon merolae*. Immunogold particles (black dots) indicate localization of the glycosyltransferase protein PDR1 (protein dividing ring 1), which forms a ring with carbohydrates that constricts to physically divide the chloroplast. See page 949.

Image: Yamato Yoshida, Haruko Kuroiwa, Tsuneyoshi Kuroiwa/Research Information Center for Extremophile, Rikkyo University, Tokyo, Japan

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www.sciencexpres.org

Tracking Hydrocarbon Plume Transport and Biodegradation at *Deepwater Horizon*

R. Camilli et al.

In late June 2010, the *Deepwater Horizon* oil plume stretched more than 35 kilometers at a depth of 1100 meters.

10.1126/science.1195223

>> *Science Podcast*

Plastic Accumulation in the North Atlantic Subtropical Gyre

K. L. Law et al.

The amount of plastic debris in the surface waters of the western North Atlantic Ocean has plateaued over the past 22 years.

10.1126/science.1192321

A Red-Shifted Chlorophyll

M. Chen et al.

A natural chlorophyll is found to absorb further in the infrared than other light-harvesting chromophores in its class.

10.1126/science.1191127

A *Vibrio* Effector Protein Is an Inositol Phosphatase and Disrupts Host Cell Membrane Integrity

C. A. Broberg et al.

Altering the homeostasis of membrane-bound signaling molecules allows a bacterial pathogen to corrupt cell function.

10.1126/science.1192850

A Unifying Genetic Model for

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Sequence variants shared by patients with a genetically complex form of muscular dystrophy explain how the disease arises.

10.1126/science.1189044

TECHNICALCOMMENTS

Comment on "The Silicate-Mediated Formose Reaction: Bottom-Up Synthesis of Sugar Silicates"

H.-J. Kim and S. A. Benner

Full text at www.sciencemag.org/cgi/content/full/329/5994/902-a

Response to Comment on "The Silicate-Mediated Formose Reaction: Bottom-Up Synthesis of Sugar Silicates"

J. B. Lambert et al.

Full text at www.sciencemag.org/cgi/content/full/329/5994/902-b

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New research questions the link between mammoth eruptions and mass extinctions.

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RESEARCH ARTICLE: TPL-2-Mediated Activation of MAPK Downstream of TLR4 Signaling Is Coupled to Arginine Availability

V. Mieulet et al.

RESEARCH ARTICLE: Arginine Usage in Mycobacteria-Infected Macrophages Depends on Autocrine-Paracrine Cytokine Signaling

J. E. Qualls et al.

PERSPECTIVE: Arginine—Master and Commander in Innate Immune Responses

S. M. Morris Jr.

In addition to acting as an enzyme substrate, arginine functions as a regulatory molecule in immune cells.

REVIEW: Phosphoinositide 3-Kinase Signaling in Thymocytes—The Need for Stringent Control

E. Fayard et al.

PI3K signaling is important in the development of normal and malignant thymocytes.

GLOSSARY

Find out what AER, AGC, and COS mean in the world of cell signaling.

SCIENCE CAREERS

www.sciencereers.org/career_magazine

Free Career Resources for Scientists

Tooling Up: A Job-Search Plan for the Person Without One (Part One)

D. Jensen

A fruitful job search takes preparation, careful consideration, and networking.

A Cosmologist Resists Academia's Work-Life Norms

S. Reed

Sarah Bridle has carved out a successful career while resisting long hours and personal sacrifices.

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COMMENTARY: 360 Degrees of Human Subjects Protections in Community-Engaged Research

L. F. Ross

When communities are both participants and partners in research, effective human subjects protections must address both individual and group risks.

RESEARCH ARTICLE: The Four-Herb Chinese Medicine PHY906 Reduces Chemotherapy-Induced Gastrointestinal Toxicity

W. Lam et al.

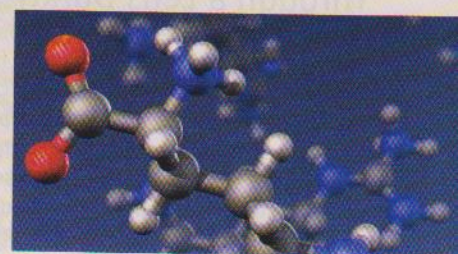
PERSPECTIVE: Are Herbal Medicines Ripe for the Cancer Clinic?

C. Eng

PODCAST

Y.-C. Cheng and A. M. VanHook

A traditional Chinese medicine reduces the intestinal toxicity of chemotherapy by inhibiting inflammation and promoting cell proliferation.



SCIENCE SIGNALING

Arginine in the immune system.

RESEARCH ARTICLE: Multivalent Integrin-Specific Ligands Enhance Tissue Healing and Biomaterial Integration

T. A. Petrie et al.

Titanium implants coated with nanoclustered integrin are tightly integrated into bone for orthopedic applications.

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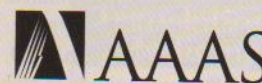
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